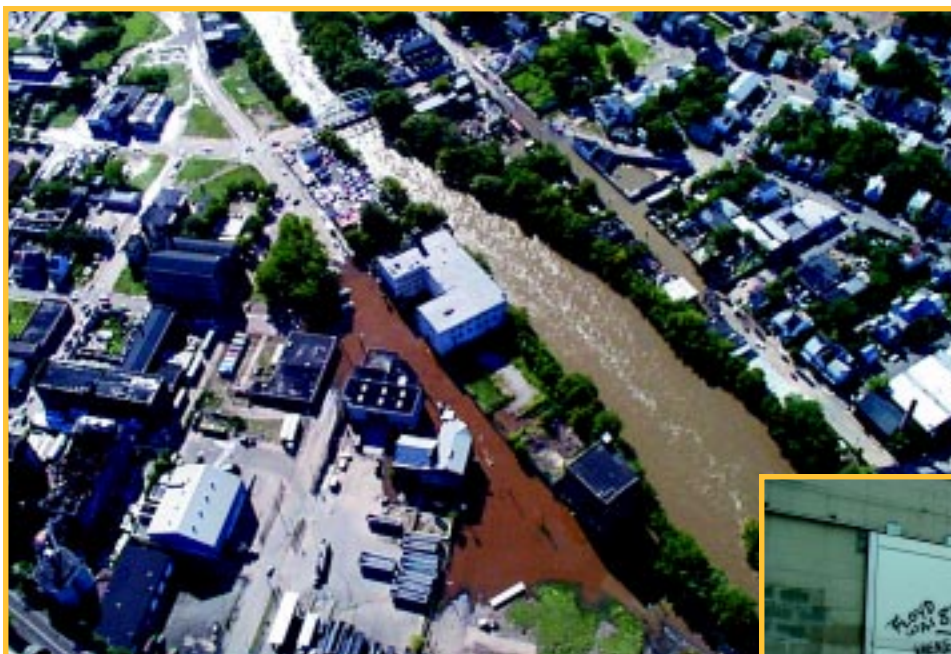


Section 7



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1.1 Overview

On September 17, 1999, Hurricane Floyd moved north along the east coast of the United States, causing major flooding along many of New Jersey's rivers and streams. The resulting widespread damage prompted President Clinton, on September 19, to issue an emergency declaration for all New Jersey counties and major disaster declarations for Bergen, Essex, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, and Union Counties.

Throughout the declared areas, a total of 76,338 residences, businesses, and public facilities suffered flood damages due to the storm. More than 4,000 businesses were directly affected. Significant business dislocation occurred statewide during the two days after the flooding, as did short-term dislocation in the communities surveyed in this report.

On September 21, New Jersey Governor Christine Whitman requested that the Federal Emergency Management Agency (FEMA) assist the State of New Jersey and its affected communities in their recovery

efforts. In response, FEMA tasked the Economic Development Administration (EDA) to undertake an assessment of this disaster's economic impacts. The general objectives of this assessment were to provide data and recommendations during the recovery process to aid in decision making and contribute to long-range mitigation initiatives and strategic planning.

Specifically, the primary purposes of this economic impact assessment were to:

- Accelerate business recovery.
- Support creation of sustainable business enterprises and disaster-resistant jobs.

To accomplish this economic assessment, a team was assembled consisting of representatives from EDA, FEMA, the New Jersey Office of Emergency Management (NJOEM), the State of New Jersey Commerce and Economic Growth Commission (CEGC), Rutgers University Center for Urban Policy Research, and URS Greiner Woodward Clyde. The team worked from FEMA's Disaster Field Office (DFO) in Piscataway, New Jersey.

The economic assessment team gathered information on pre- and post-disaster conditions for all nine declared counties and then specifically focused on Lodi Borough in Bergen County, the City of Trenton in Mercer County, the Cities of Passaic and Paterson in Passaic County, and the boroughs of Bound Brook and Manville in Somerset County. These six communities were identified as having the most potential for incurring negative long-term economic impacts as a result of the flooding. A summary of damage estimates for businesses in the six focus communities is provided in Table 1.1. Sections 4 through 12 of this report provide detailed descriptions and information for each of the nine declared counties as well as the sources for the focus community damage estimates. The figures presented in Table 1.1 are estimates only and should be regarded more for their general order of magnitude than for actual values reported.

Table 1-1 Summary of Estimated Business-Related Losses

Community	Revenue Losses	Payroll Losses*	Structural Property Damage	Nonstructural Property & Equipment Damage	Inventory Damage	Total**
Lodi Borough	\$5,100,000	\$1,100,000	\$1,400,000	\$3,300,000	\$2,500,000	\$12,000,000
City of Trenton	\$1,000,000	\$104,000	\$1,500,000	\$2,500,000	\$4,000,000	\$9,000,000
City of Passaic	\$3,200,000	\$5,500,000	\$1,000	\$4,100,000	\$9,600,000	\$17,000,000
City of Paterson	\$2,000,000	\$0	\$280,000	\$3,500,000	\$2,200,000	\$8,000,000
Bound Brook Borough	\$13,000,000	\$3,300,000	\$14,000,000	\$20,000,000	\$30,000,000	\$77,000,000
Manville Borough	\$1,800,000	\$460,000	\$400,000	\$410,000	\$550,000	\$3,000,000
Total**	\$26,000,000	\$10,000,000	\$18,000,000	\$34,000,000	\$49,000,000	\$127,000,000

* Payroll losses are embedded in estimates for lost revenue and are therefore not included in the community totals.

**Totals were rounded to two significant digits.

1.2 Conclusions

Although flooding from Hurricane Floyd was devastating on a local and individual scale in many communities, the resulting damage is not likely to have a significantly adverse effect on the State's economy over the next 5 to 10 years. This is due to the following key factors:

- No single sector of the statewide economy was affected by flooding to the extent that there was a significant impact on State or county-level economic performance, with the exception of the loss of manufacturing jobs in Passaic County;
- The vast majority of businesses throughout the State were operating at normal levels within a short period of time following the disaster; and,
- The economy of New Jersey was very strong before the disaster, with low unemployment and accelerating employment growth.

However, on a community level, the following was noted:

- Some individual businesses in the City of Trenton were distressed prior to the disaster. The disaster compounded the problem and underscores the need for financial assistance. However, flood-related losses are not anticipated to widely affect the economy of this municipality in the long-term.
- Lodi, Bound Brook, and Manville Boroughs and the Cities of Passaic and Paterson suffered the most severe economic impacts as a direct result of the flood. These communities therefore, became the focus of this report. Recommendations are offered in the report to minimize adverse long-term economic effects in these communities.

1.3 Recommendations for Economic Recovery and Sustainability

This study includes a wide range of recommendations for the affected communities, declared counties, the State of New Jersey, and the Federal Government aimed at providing long-term recovery from the economic impact of Hurricane Floyd and reducing the effects of future disasters in New Jersey.

1.3.1 Mitigation Planning Strategies

Communities should consider disaster recovery as an opportunity to make proactive decisions to make the local economy more sustainable and disaster resistant. Following are four concepts to incorporate in the process of making these decisions:

- ▣ **Initiate a long-term economic recovery planning process.** The State and local communities should consider the following measures as part of a program to increase the long-term viability of the business sector.
 - ▣ The State of New Jersey should use its Strategic Economic Development Plan to set priorities for both short- and long-term recovery efforts.
 - ▣ State and local agencies should work with industry associations and business leaders to design a sector by sector strategy for economic recovery consistent with the Strategic Economic Development Plan addressing issues of marketing, modernization, skill development, and access to capital.
 - ▣ Efforts to diversify local economies should be continued and integrated into ongoing strategic planning for economic development. The intent is to help reduce the vulnerability of local economies to disruption if the operations of a few large employers or dominant employment sectors are impacted.
- ▣ **Integrate mitigation concepts within the economic recovery planning process.** The opportunity exists within the affected communities to rebuild using more efficient, desirable, and sustainable development practices. It is critical for the State of New Jersey and local communities to connect their recovery operations with disaster mitigation concepts, help businesses recover, and encourage new business development in ways that make them more disaster resistant and less vulnerable to real property damage. These mitigation concepts include the following:
 - ▣ Encourage businesses to change current practices and introduce more disaster-resistant methods of construction.
 - ▣ Encourage disaster-resistant development and redevelopment strategies including gradual abandonment of floodplain areas through constraints on new development, acquisition, and relocation of existing development; structure elevation; floodplain storage preservation; and early flood warning and education.

- Prepare multi-hazard mitigation strategies to be quickly implemented in the event of future disasters.
- **Integrate local businesses into the recovery process.** Recognizing the business community's importance in minimizing the adverse effects from disasters and restoring economic stability, the following strategies can be used to help businesses participate in the recovery process:
 - The first step is to find businesses that received damages and assess their losses. Each community's Emergency Management Coordinator (EMC) or local Business Recovery Coordinator, if established, should contact businesses to document damages and impacts on revenue generation, job losses, and future viability and convey the information to county EMCs, NJOEM, and FEMA. In addition, follow-up coordination is critical in tracking the post-disaster situation as business owners update their assessments with more accurate information.
 - Communities should ensure that local businesses to participate in economic recovery planning efforts and contingency plans. The intent is to jointly identify resources available to strengthen the capabilities of the community to do short- and long-term strategic recovery planning, maximize available resources through community-based, grassroots organizations and provide practical support to businesses and communities in preparing grant applications.
 - Identify and protect disadvantaged immigrant communities and other vulnerable ethnic groups that are often hardest hit by disasters by developing innovative ways to disseminate information and expertise.
- **Use today's economic recovery lessons to work smarter in the future.** Communities should conduct an after-action assessment of which economic recovery activities went well, which ones did not, and what can be done to be better prepared for the next flood. The lessons learned should be incorporated into a contingency operating plan to enable local government and businesses to work smarter, not harder, for the next recovery effort.

1.3.2 Specific Mitigation and Recovery Measures

The following three categories of recommendations are intended to highlight key mitigation and recovery actions that should be considered for incorporation into individual community mitigation and recovery plans.

- **Implement appropriate physical mitigation measures.** The following includes a common theme of attaining a balance between creating effective disaster mitigation while accelerating the recovery of business activities:
 - Businesses housed in large, structurally sound buildings that are able to withstand anticipated flood depths and velocities may be protected by methods that waterproof building exteriors and provide flood shields or barriers at building

openings. Other physical measures range from elevating whole structures and/or substantial business assets (e.g., furnaces and electrical boxes) above flood elevations to selecting safe (i.e., non flood-prone) locations for storing critical business records. It should be stressed that any physical modifications to a building located in the Special Flood Hazard Area of a community participating in the National Flood Insurance Program (NFIP) must be properly reviewed and permitted by the local floodplain administrator. Property owners are advised to consult with the administrator and obtain a copy of the local floodplain management ordinance and other technical information from the NFIP. This will enable them how to comply with the ordinance, as well as to identify the most appropriate building modification options for their specific situation.

- Where buildings and businesses must remain in susceptible floodplain areas, an integral component of a nonstructural flood damage mitigation strategy is an early flood warning system to ensure adequate time is available to secure inventory and business records, install flood barriers and shields (if required), shut down utilities to avoid unnecessary damages, and avoid dangerous conditions for business owners and employees.
- Where in-place protection is not practical, it may make sense to acquire sites that suffer from recurring floods, relocate businesses to areas outside of the floodplain and remove threatened structures. At the same time, relocation plans must reflect the needs of relocated businesses by assuring that an adequate supply of viable commercial properties and nearby housing exists in safe locations.
- Where nonstructural flood protection measures may not be practical or feasible, structural flood control measures including floodwalls; levees; channel improvements; or upstream stormwater detention may be warranted to contain the flood threat to areas free of vulnerable development.
- Relocate critical facilities vital to providing community services (hospitals, major roadways, water supply and waste treatment plants, police and fire stations, electrical generation facilities, emergency operations and response centers, and emergency shelters and evacuation routes) outside the floodplain or, where this is not feasible, ensure critical facilities are protected from flooding through approved structural measures.
- Relocate and prohibit unsafe land use activities (structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials that can cause great environmental damage) from high hazard floodplains to reduce pollution of floodwaters by hazardous materials.
- Review zoning ordinances, building codes, and enforcement mechanisms to ensure they are up to date and serve to rebuild a stronger and more disaster-resistant community.

- Anticipate future disaster recovery needs by integrating provisions for strategic temporary relocation of displaced residents and businesses to maximize opportunities for economic recovery.
- **Increase flood risk awareness and facilitate purchase of sufficient flood insurance.** After physical mitigation measures to prevent damage, flood insurance is the most important line of defense for business. However, only 18 percent of impacted businesses with insurance had flood insurance. Therefore, the following should be considered with regard to flood insurance for businesses:
 - Local governments should tie incentive programs for business recovery to securing and maintaining adequate flood insurance policies.
 - Federal, State, and local agencies may be able to make funds available for businesses to borrow against expected flood insurance payments so that repairs can begin in a timely manner.
 - Local governments should make Flood Insurance Rate Maps (FIRMs) more conveniently available to the general public to help communicate flood risks to community members and enhance awareness.
 - The State and local communities should create a program to inform business owners about the cost and availability of flood insurance but also focusing on the need for flood insurance coverage and its benefits to businesses and the community at large.
 - Local governments should increase the availability of information and offer adequate protection for business tenants.
- **Facilitate business recovery.** The following examples are specific steps that can be taken to facilitate business recovery:
 - Local governments should streamline and shorten the time it takes to make zoning, variance, and building permit decisions to help local zoning and building permit offices respond to the increased application load on a timely basis and increase opportunities to incorporate floodproofing and other hazard mitigation measures into reconstruction.
 - Communities should consider giving purchasing preferences to local businesses to maximize the flow of money within the community. The more times recovery related dollars are spent in the community, the greater the benefit the community receives.
 - Communities should actively develop a program to provide parking to patrons of local businesses. Safe parking with easy access to the shopping district is a key factor to economic development success.
 - Communities should help market and promote local economic recovery efforts to celebrate success stories, improve communications, and effectively convey a positive message of hope and progress. Through publicizing recovery,

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residents and consumers are aware of when and where businesses are reopened and they become more involved in the process of recovery.

- Communities should encourage corporate disaster relief efforts through advertising.

1.3.3 Federal, State, and Local Agency Support, Assistance, and Coordination

The following four concepts identify, in general terms, important support and interactions that need to occur as communities face decisions that will affect the survivability of impacted businesses.

- **Support mitigation planning and implementation efforts** including the development and implementation of long-range mitigation and recovery plans.
 - Local, State, and Federal planning agencies can provide support to ensure replacement development is compatible with local development goals and objectives. Providing technical assistance on long-term economic recovery planning for communities and the integration of mitigation measures within the planning process is especially valuable.
 - Federal mitigation money made available as a result of this disaster should be utilized to implement strategies identified in the State's Mitigation Plan including the involvement of smaller communities in the reassessment and implementation of the plan.
 - Funding mechanisms and technical assistance are available for mitigation activities such as buyouts and relocation. In addition, communities will need financial and technical assistance to help implement locally prioritized, strategic long-term economic recovery plans.
 - FEMA and NJOEM should consider presenting a series of public education workshops and town meetings to educate business owners and municipalities on steps they can implement to mitigate against future flood damage, focusing on common sense approaches to mitigation recovery and providing a forum with local business owners exchanging ideas.
- **Provide financial incentives.** Local, State, and Federal agencies can take several steps to assist businesses by providing grants, low-interest loans, and other financial incentives to ease business recovery in the wake of Hurricane Floyd flood damage.
 - Local governments should consider postponement or forgiveness of a portion of property tax payments for flood-affected businesses that commit to rebuild within the community.
 - On October 18, 1999, Governor Whitman, State Senate President Donald DiFrancesco, and State Assembly Speaker Jack Collins announced support for legislation granting sales tax exemptions to victims of Hurricane Floyd. The State should

consider implementing a similar exemption or deferment of sales tax on replacement equipment, new inventory, and materials and supplies needed to repair flood damages for businesses damaged by the storm.

- Communities affected by disasters should consider petitioning the State for temporary or partial sales tax relief on behalf of local businesses to spur local economic recovery.
- State Investment Tax Credits or Manufacturer's Limited Exempt Certificates should be considered to encourage businesses to rebuild in the same location or remain in the same community.
- Local governments, in conjunction with State and Federal agencies, should offer relocation assistance to businesses located in areas of repeated flooding, including site selection, grants or loans for moving expenses, and structural enhancements.
- Local officials should conduct a forum with local mortgage bankers and lending institutions with the purpose of encouraging low interest loans and deferred payment schedules to stimulate economic recovery.
- The State should consider a CEGC/Department of Treasury recommendation that the New Jersey Commerce Commission request \$20 million to implement a low-interest, long-term loan program for companies that suffered damages and were not covered by business interruption insurance or for "acts of God," or did not have insurance covering the value of labor and documents other than work products.
- EDA should reduce or waive matching fund requirements consistent with existing statutes and regulations for severely affected communities which apply for economic adjustment grants employing mitigation techniques
- **Establish a focal point for economic recovery in local government.** Local government can be more responsive in making critical decisions on economic recovery. A single point of contact, such as a "Business Recovery Coordinator," should be established to help the community and its businesses to:
 - Address critical short-term economic recovery issues more efficiently;
 - Coordinate business recovery efforts with emergency management operations more effectively;
 - Coordinate strategic long-term economic recovery planning more effectively; and
 - Connect business owners with the resources they need in the most efficient manner.
- **Develop and strengthen post-disaster recovery partnerships.** Efforts should be focused on establishing permanent communication channels between State and local economic development agencies and emergency management agencies, as well as facilitating the development of a network to integrate the business, residential, and political elements of the community.

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- Communication between the local business and political community should be developed, strengthened, and exercised on a regular basis so that business owners and political leaders will be comfortable using them when a disaster occurs. Affected municipalities have a unique opportunity to capitalize on the momentum and resources that have come together in the post-disaster environment to build back more resistant to future disasters and provide comprehensive incentives for restoring and retaining business activities.
- Communication between the economic development agencies and emergency management agencies should be forged and maintained between State and local officials from economic development agencies and emergency management agencies. Exercising these channels should provide NJOEM with more effective use of NJEDA's programs.
- A website that acts as a network to integrate the business, residential, and political elements of the community should be created.
- A reliable PDA database should be compiled to assist the State and Federal governments in rapidly and accurately identifying areas requiring the most attention.

Section 2 of this report outlines the approach and methodology used to develop the data and recommendations. Sections 3 through 12 explain the important aspects of the pre- and post-disaster economies as well as relevant conclusions and a full range of recommendations for the State of New Jersey, the nine counties, and each of the six communities.